There are two folders in this file, along with the lab manual and the normalized Blasius velocity profile data.

1) **PIV data:**

PIV data folder comprises of both laminar and turbulent velocity profile data for five x locations. The first column in each file indicates y location from the wall (in mm), and the second column indicates the velocity values in m/s.

i)   You need to calculate the following parameters and show the values in a table form shown below (**only for the velocity profile measured at x=650 mm**).

Parameters	Laminar		Turbulent	
	Experimental	Theoretical	Experimental	Theoretical
δ (Boundary layer thickness)				
δ^* (Displacement thickness)				
θ (Momentum thickness)				
H (shape factor)				
C_f				

ii)   Normalize y with δ^* and U with U_∞ at a x location. Repeat the same for other locations as well. Now *compare the normalized velocity profile data (for all five locations) with the Blasius velocity profile data in a single plot*. (note: Only for the laminar flow)

2) **Pitot tube data:**

Pitot tube data folder comprises of both laminar and turbulent velocity profile data at x=650 mm. The first column in each file indicates y location from the wall (in mm), and the second column indicates the velocity values in m/s.

i)   You need to calculate the following parameters and show the values in a table form as shown below.

Parameters	Laminar		Turbulent	
	Experimental	Theoretical	Experimental	Theoretical
δ (Boundary layer thickness)				
δ^* (Displacement thickness)				
θ (Momentum thickness)				
H (shape factor)				
C_f				

ii) Normalize y with δ^* and U with U_∞ and ***compare the normalized velocity profile data with the Blasius velocity profile data in a single plot***. (Note: only for the laminar flow).